

SEQUENCE LISTING

<110> Nakayama, Naoki
Wen, Duanzhi
Han, Chun-ya
He, Ching
Yu, Dongyin

<120> Chordin-like polypeptides

<130> 99-569

<140>

<141>

<160> 31

<170> PatentIn Ver. 2.0

<210> 1

<211> 1864

<212> DNA

<213> Mus musculus

<220>

<221> CDS

<222> (148) .. (1146)

<400> 1

ccacgcgtcc ggagcgcccc agggagctca gagcttctgc aagcgtggca gcaggaggag 60

gccagtgcc agcttttagtc caccgctcct ctcccttgag cccctgaatt gcattttgca 120

gtagctcgaa ggagaaaaaa gtagaag atg gat ggc atg aaa tac atc att tcc 174
Met Asp Gly Met Lys Tyr Ile Ile Ser

1

5

tta ttt ttc atc ttt gtt ttc cta gaa gga agc aaa aca gaa caa gta 222
Leu Phe Phe Ile Phe Val Phe Leu Glu Gly Ser Lys Thr Glu Gln Val
10 15 20 25

aaa cac tca gac aca tat tgc gtg ttt caa gac aag aag tat aga gtg 270
Lys His Ser Asp Thr Tyr Cys Val Phe Gln Asp Lys Lys Tyr Arg Val
30 35 40

ggg gag aaa tgg cat ccc tac ctg gaa ccg tat gga ctg gtt tac tgt 318
Gly Glu Lys Trp His Pro Tyr Leu Glu Pro Tyr Gly Leu Val Tyr Cys
45 50 55

gtg aac tgc atc tgc tct gag aat ggg aat gtg ctt tgc agc cga gtc 366
Val Asn Cys Ile Cys Ser Glu Asn Gly Asn Val Leu Cys Ser Arg Val
60 65 70

aga tgt cca agt ctt cat tgc ctt tca ccc gtg cat att cct cat ctc 414
Arg Cys Pro Ser Leu His Cys Leu Ser Pro Val His Ile Pro His Leu
75 80 85

Cys Lys Val Cys Pro Gly Lys Lys Ala Lys Gly Ala Leu Ala Gly Gly
 315 320 325

cct gcc ttt ggt tgaatgagat tcacacatag tcctattcag tcttctttgt 1186
 Pro Ala Phe Gly
 330

tcatcaaaac tataaatgac ctgtcttata gttctaacga taatagttct agcaagaatg 1246
 aacttcatcc tttcgtcttc tgagacactg atgggttgctt tgaaggaatt aactactcag 1306
 agtttctttt gtctacaatg tcaaacacat gccaaagttgc ttatcttggt cttgcttttc 1366
 taaattagag agtttacgtt atcactgttt tagaaaaagt cacacctttc atgggtttaa 1426
 tcaccaactc acttcaagac ataatccagt actcttttca gatgagatat aaatgagtta 1486
 cagtggagag aaattagatt ctgatccaaa tgcacaaat ccacaagtat cttaccccat 1546
 gtgaacattt taaagtttat tactgtgttc cacattgcta ttttaatttg caatttcttt 1606
 ttaaattttc tgagatattg tatctgtata tacttatggg gtacagtatg ttaattcaat 1666
 acaaataac aaggtataat tgtcaaatca gggtaattat cattctctct cctctgattt 1726
 tatccctaga ctcttctagt cattttaaaa tttatcatca attgggtttt tgatatggta 1786
 actccactgt gctaaagaaa ccattcattc taatggcatt ttaggatcta ctatctaacc 1846
 tctatctccc cttctgtt 1864

<210> 2
 <211> 333
 <212> PRT
 <213> Mus musculus

<400> 2
 Met Asp Gly Met Lys Tyr Ile Ile Ser Leu Phe Phe Ile Phe Val Phe
 1 5 10 15
 Leu Glu Gly Ser Lys Thr Glu Gln Val Lys His Ser Asp Thr Tyr Cys
 20 25 30
 Val Phe Gln Asp Lys Lys Tyr Arg Val Gly Glu Lys Trp His Pro Tyr
 35 40 45
 Leu Glu Pro Tyr Gly Leu Val Tyr Cys Val Asn Cys Ile Cys Ser Glu
 50 55 60
 Asn Gly Asn Val Leu Cys Ser Arg Val Arg Cys Pro Ser Leu His Cys
 65 70 75 80
 Leu Ser Pro Val His Ile Pro His Leu Cys Cys Pro Arg Cys Pro Asp
 85 90 95
 Ser Leu Pro Pro Val Asn Asn Lys Val Thr Ser Lys Ser Cys Glu Tyr

100					105					110						
Asn	Gly	Thr	Thr	Tyr	Gln	His	Gly	Glu	Leu	Phe	Ile	Ala	Glu	Gly	Leu	
115					120					125						
Phe	Gln	Asn	Arg	Gln	Pro	Asn	Gln	Cys	Ser	Gln	Cys	Ser	Cys	Ser	Glu	
130					135					140						
Gly	Asn	Val	Tyr	Cys	Gly	Leu	Lys	Thr	Cys	Pro	Lys	Leu	Thr	Cys	Ala	
145					150					155					160	
Phe	Pro	Val	Ser	Val	Pro	Asp	Ser	Cys	Cys	Arg	Val	Cys	Arg	Gly	Asp	
165					170					175						
Ala	Glu	Leu	Ser	Trp	Glu	His	Ala	Asp	Gly	Asp	Ile	Phe	Arg	Gln	Pro	
180					185					190						
Ala	Asn	Arg	Glu	Ala	Arg	His	Ser	Tyr	Leu	Arg	Ser	Pro	Tyr	Asp	Pro	
195					200					205						
Pro	Pro	Asn	Arg	Gln	Ala	Gly	Gly	Leu	Pro	Arg	Phe	Pro	Gly	Ser	Arg	
210					215					220						
Ser	His	Arg	Gly	Ala	Val	Ile	Asp	Ser	Gln	Gln	Ala	Ser	Gly	Thr	Ile	
225					230					235					240	
Val	Gln	Ile	Val	Ile	Asn	Asn	Lys	His	Lys	His	Gly	Gln	Val	Cys	Val	
245					250					255						
Ser	Asn	Gly	Lys	Thr	Tyr	Ser	His	Gly	Glu	Ser	Trp	His	Pro	Asn	Leu	
260					265					270						
Arg	Ala	Phe	Gly	Ile	Val	Glu	Cys	Val	Leu	Cys	Thr	Cys	Asn	Val	Thr	
275					280					285						
Lys	Gln	Glu	Cys	Lys	Lys	Ile	His	Cys	Pro	Asn	Arg	Tyr	Pro	Cys	Lys	
290					295					300						
Tyr	Pro	Gln	Lys	Ile	Asp	Gly	Lys	Cys	Cys	Lys	Val	Cys	Pro	Gly	Lys	
305					310					315					320	
Lys	Ala	Lys	Gly	Ala	Leu	Ala	Gly	Gly	Pro	Ala	Phe	Gly				
325					330											

<210> 3
 <211> 1496
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (132)..(1487)

<400> 3
 tagccagacc tcggacgaga gcgccccggg gagctcggag cgcgtgcacg cgtggcagac 60

ggg gcc aga agt cac cgg gga gct ctt atg gat tcc cag caa gca tca	842
Gly Ala Arg Ser His Arg Gly Ala Leu Met Asp Ser Gln Gln Ala Ser	
225 230 235	
gga acc att gtg caa att gtc atc aat aac aaa cac aag cat gga caa	890
Gly Thr Ile Val Gln Ile Val Ile Asn Asn Lys His Lys His Gly Gln	
240 245 250	
gtg tgt gtt tcc aat gga aag acc tat tct cat ggc gag tcc tgg cac	938
Val Cys Val Ser Asn Gly Lys Thr Tyr Ser His Gly Glu Ser Trp His	
255 260 265	
cca aac ctc cgg gca ttt ggc att gtg gag tgt gtg cta tgt act tgt	986
Pro Asn Leu Arg Ala Phe Gly Ile Val Glu Cys Val Leu Cys Thr Cys	
270 275 280 285	
aat gtc acc aag caa gag tgt aag aaa atc cac tgc ccc aat cga tac	1034
Asn Val Thr Lys Gln Glu Cys Lys Lys Ile His Cys Pro Asn Arg Tyr	
290 295 300	
ccc tgc aag tat cct caa aaa ata gac gga aag tgc tgc aag gtg tgt	1082
Pro Cys Lys Tyr Pro Gln Lys Ile Asp Gly Lys Cys Cys Lys Val Cys	
305 310 315	
cca ggt aaa aaa gca aaa gaa gaa ctt cca ggc caa agc ttt gac aat	1130
Pro Gly Lys Lys Ala Lys Glu Glu Leu Pro Gly Gln Ser Phe Asp Asn	
320 325 330	
aaa ggc tac ttc tgc ggg gaa gaa acg atg cct gtg tat gag tct gta	1178
Lys Gly Tyr Phe Cys Gly Glu Glu Thr Met Pro Val Tyr Glu Ser Val	
335 340 345	
ttc atg gag gat ggg gag aca acc aga aaa ata gca ctg gag act gag	1226
Phe Met Glu Asp Gly Glu Thr Thr Arg Lys Ile Ala Leu Glu Thr Glu	
350 355 360 365	
aga cca cct cag gta gag gtc cac gtt tgg act att cga aag ggc att	1274
Arg Pro Pro Gln Val Glu Val His Val Trp Thr Ile Arg Lys Gly Ile	
370 375 380	
ctc cag cac ttc cat att gag aag atc tcc aag agg atg ttt gag gag	1322
Leu Gln His Phe His Ile Glu Lys Ile Ser Lys Arg Met Phe Glu Glu	
385 390 395	
ctt cct cac ttc aag ctg gtg acc aga aca acc ctg agc cag tgg aag	1370
Leu Pro His Phe Lys Leu Val Thr Arg Thr Thr Leu Ser Gln Trp Lys	
400 405 410	
atc ttc acc gaa gga gaa gct cag atc agc cag atg tgt tca agt cgt	1418
Ile Phe Thr Glu Gly Glu Ala Gln Ile Ser Gln Met Cys Ser Ser Arg	
415 420 425	
gta tgc aga aca gag ctt gaa gat tta gtc aag gtt ttg tac ctg gag	1466
Val Cys Arg Thr Glu Leu Glu Asp Leu Val Lys Val Leu Tyr Leu Glu	
430 435 440 445	

aga tct gaa aag ggc cac tgt taggcaagg
 Arg Ser Glu Lys Gly His Cys
 450

1496

<210> 4
 <211> 452
 <212> PRT
 <213> Homo sapiens

<400> 4
 Met Gly Gly Met Lys Tyr Ile Phe Ser Leu Leu Phe Phe Leu Leu Leu
 1 5 10 15
 Glu Gly Gly Lys Thr Glu Gln Val Lys His Ser Glu Thr Tyr Cys Met
 20 25 30
 Phe Gln Asp Lys Lys Tyr Arg Val Gly Glu Arg Trp His Pro Tyr Leu
 35 40 45
 Glu Pro Tyr Gly Leu Val Tyr Cys Val Asn Cys Ile Cys Ser Glu Asn
 50 55 60
 Gly Asn Val Leu Cys Ser Arg Val Arg Cys Pro Asn Val His Cys Leu
 65 70 75 80
 Ser Pro Val His Ile Pro His Leu Cys Cys Pro Arg Cys Pro Glu Asp
 85 90 95
 Ser Leu Pro Pro Val Asn Asn Lys Val Thr Ser Lys Ser Cys Glu Tyr
 100 105 110
 Asn Gly Thr Thr Tyr Gln His Gly Glu Leu Phe Val Ala Glu Gly Leu
 115 120 125
 Phe Gln Asn Arg Gln Pro Asn Gln Cys Thr Gln Cys Ser Cys Ser Glu
 130 135 140
 Gly Asn Val Tyr Cys Gly Leu Lys Thr Cys Pro Lys Leu Thr Cys Ala
 145 150 155 160
 Phe Pro Val Ser Val Pro Asp Ser Cys Cys Arg Val Cys Arg Gly Asp
 165 170 175
 Gly Glu Leu Ser Trp Glu His Ser Asp Gly Asp Ile Phe Arg Gln Pro
 180 185 190
 Ala Asn Arg Glu Ala Arg His Ser Tyr His Arg Ser His Tyr Asp Pro
 195 200 205
 Pro Pro Ser Arg Gln Ala Gly Gly Leu Ser Arg Phe Pro Gly Ala Arg
 210 215 220
 Ser His Arg Gly Ala Leu Met Asp Ser Gln Gln Ala Ser Gly Thr Ile
 225 230 235 240
 Val Gln Ile Val Ile Asn Asn Lys His Lys His Gly Gln Val Cys Val

																Met	Glu	Gly	Ile	Lys	Tyr	Ile	Ala	Ser	Leu	
																1				5					10	
gtt	ttc	ttc	ttt	gtt	ttc	ctg	gaa	gca	agc	aaa	aca	gag	cca	gta	aaa	219										
Val	Phe	Phe	Phe	Val	Phe	Leu	Glu	Ala	Ser	Lys	Thr	Glu	Pro	Val	Lys											
				15					20					25												
cac	tca	gag	aca	tat	tgc	atg	ttt	caa	gac	aag	aag	tat	aga	gtt	ggc	267										
His	Ser	Glu	Thr	Tyr	Cys	Met	Phe	Gln	Asp	Lys	Lys	Tyr	Arg	Val	Gly											
				30					35					40												
gag	aaa	tgg	cat	ccc	tac	ctg	gaa	cca	tat	gga	ctg	gtt	tac	tgt	gtg	315										
Glu	Lys	Trp	His	Pro	Tyr	Leu	Glu	Pro	Tyr	Gly	Leu	Val	Tyr	Cys	Val											
				45					50					55												
aac	tgc	atc	tgc	tca	gag	aat	ggg	aat	gtg	ctt	tgc	agc	cga	gtc	aga	363										
Asn	Cys	Ile	Cys	Ser	Glu	Asn	Gly	Asn	Val	Leu	Cys	Ser	Arg	Val	Arg											
				60					65					70												
tgt	cca	act	ctt	cat	tgc	ctt	tca	ccc	gtg	cat	att	cct	cat	ctg	tgt	411										
Cys	Pro	Thr	Leu	His	Cys	Leu	Ser	Pro	Val	His	Ile	Pro	His	Leu	Cys											
				75					80					85												
tgc	ccc	cgt	tgc	cca	gac	tcc	tta	cca	ccg	atg	aac	aat	aag	gtg	acc	459										
Cys	Pro	Arg	Cys	Pro	Asp	Ser	Leu	Pro	Pro	Met	Asn	Asn	Lys	Val	Thr											
				95					100					105												
agc	aag	tcc	tgc	gaa	tac	aat	ggg	acc	acc	tac	caa	cac	gga	gag	ctc	507										
Ser	Lys	Ser	Cys	Glu	Tyr	Asn	Gly	Thr	Thr	Tyr	Gln	His	Gly	Glu	Leu											
				110					115					120												
ttc	ata	gct	gaa	ggg	ctc	ttt	cag	aac	cgg	cag	ccc	aat	cag	tgc	agt	555										
Phe	Ile	Ala	Glu	Gly	Leu	Phe	Gln	Asn	Arg	Gln	Pro	Asn	Gln	Cys	Ser											
				125					130					135												
cag	tgc	agc	tgc	tcg	gag	ggg	aat	gtg	tat	tgt	ggc	ctc	aag	act	tgc	603										
Gln	Cys	Ser	Cys	Ser	Glu	Gly	Asn	Val	Tyr	Cys	Gly	Leu	Lys	Thr	Cys											
				140					145					150												
ccc	aaa	ctg	acc	tgt	gca	ttc	cca	gtc	tct	gtt	cca	gat	tcc	tgc	tgc	651										
Pro	Lys	Leu	Thr	Cys	Ala	Phe	Pro	Val	Ser	Val	Pro	Asp	Ser	Cys	Cys											
				155					160					165												
cga	gta	tgc	aga	ggg	gat	gga	gaa	tta	tca	tgg	gaa	cat	tct	gat	gct	699										
Arg	Val	Cys	Arg	Gly	Asp	Gly	Glu	Leu	Ser	Trp	Glu	His	Ser	Asp	Ala											
				175					180					185												
gat	atc	ttc	cgg	caa	cct	gcc	aac	aga	gaa	gca	aga	cat	tct	tac	ctc	747										
Asp	Ile	Phe	Arg	Gln	Pro	Ala	Asn	Arg	Glu	Ala	Arg	His	Ser	Tyr	Leu											
				190					195					200												
cgt	tcc	ccc	tac	gat	cct	cca	cca	agc	aga	caa	gct	gga	ggc	ctt	cct	795										
Arg	Ser	Pro	Tyr	Asp	Pro	Pro	Pro	Ser	Arg	Gln	Ala	Gly	Gly	Leu	Pro											
				205					210					215												
cgc	ttt	gct	ggg	agc	aga	agt	cac	cgg	gga	gct	gtc	att	gat	tct	cag	843										
Arg	Phe	Ala	Gly	Ser	Arg	Ser	His	Arg	Gly	Ala	Val	Ile	Asp	Ser	Gln											

220

225

230

caa gca tca ggg acc atc gtg cag atc gtc atc aat aac aag cac aaa 891
 Gln Ala Ser Gly Thr Ile Val Gln Ile Val Ile Asn Asn Lys His Lys
 235 240 245 250

cat gga caa gtg tgt gtt tcc aat gga aag acc tat tct cac gga gaa 939
 His Gly Gln Val Cys Val Ser Asn Gly Lys Thr Tyr Ser His Gly Glu
 255 260 265

tcc tgg cat tca aat cta cga gct ttt ggc att gtg gaa tgt gtt cta 987
 Ser Trp His Ser Asn Leu Arg Ala Phe Gly Ile Val Glu Cys Val Leu
 270 275 280

tgc act tgt aat gtc acc aag caa gaa tgt aag aaa atc cac tgc ccc 1035
 Cys Thr Cys Asn Val Thr Lys Gln Glu Cys Lys Lys Ile His Cys Pro
 285 290 295

aat cga tac ccc tgc aag tat cct caa aaa tta gat gga aag tgc tgc 1083
 Asn Arg Tyr Pro Cys Lys Tyr Pro Gln Lys Leu Asp Gly Lys Cys Cys
 300 305 310

aag gtg tgc cca gaa gaa cct cca agt caa aac ttt gac agc aaa ggt 1131
 Lys Val Cys Pro Glu Glu Pro Pro Ser Gln Asn Phe Asp Ser Lys Gly
 315 320 325 330

tcc ttt tgt gga gaa gaa acc atg cct gta tat gag gct gtg ctc gtg 1179
 Ser Phe Cys Gly Glu Glu Thr Met Pro Val Tyr Glu Ala Val Leu Val
 335 340 345

gag gat gga gag aca gcc aga aaa gta gca ctg gag acc gag aaa cca 1227
 Glu Asp Gly Glu Thr Ala Arg Lys Val Ala Leu Glu Thr Glu Lys Pro
 350 355 360

cct caa gta gta ggt tca cgt ttg gac tat tcg aaa ggg cat tct cca 1275
 Pro Gln Val Val Gly Ser Arg Leu Asp Tyr Ser Lys Gly His Ser Pro
 365 370 375

gca ctt cca cat tgagaagatt tccaaggaga tgtttgggga gctccatcat 1327
 Ala Leu Pro His
 380

ttcaagctgg tgactcgaac caccatgaac cagtgaaga tcttcgctga aggagaagct 1387

cagctcagcc agatgtgctc aagtcgggtg tgcagaacag aactggaaga tttggtccag 1447

gttttgtacc tggagagacc tgaaaaggac cactgttaga caaacagtc aggattgaat 1507

agtatcaatc aaggaaaccc aagctgcagc tggactgccg gcttacttta cttaagtcaa 1567

cagtgtcca aaacccaaa gtcaacctca gtcaaattat ccagtcacag cacaccttgt 1627

tcctctatgt gcagcgggtg gccagccctc aaacatctcc tgtaaagaga atagaggagt 1687

ctttaatggt ttctgggggt ggggggagaa gggataggac tttgtggtac agctctatct 1747

tctctgagaa tcacatttat ttgcaggtta aagtagaaaa gaaaaccact ttttagggat 1807

tccagcgttt taatgctggg tagaatatag agcatagggg aaaggggcca aactgcctat 3547
 agttagtaga gaaaaatgaa tgtggttctt ttgtgcattt atgtgtatca taaacacttg 3607
 ggaaagcaaa aaccataagc accattttgc aactttatcc attttccagt tagctcatgt 3667
 aaacgagcac gaataacaaa acagtattac tctttcgcac ttctcacagg acatgtaccc 3727
 aaatacggta cttatttatg tagtcactgt gtttcaggac ttttacgtta ataaaatttt 3787
 tattttaaatt ttttaaaaaa aaaaaaaaaa aaaaaaaaaa 3827

<210> 6
 <211> 382
 <212> PRT
 <213> Rattus norvegicus

<400> 6
 Met Glu Gly Ile Lys Tyr Ile Ala Ser Leu Val Phe Phe Phe Val Phe
 1 5 10 15
 Leu Glu Ala Ser Lys Thr Glu Pro Val Lys His Ser Glu Thr Tyr Cys
 20 25 30
 Met Phe Gln Asp Lys Lys Tyr Arg Val Gly Glu Lys Trp His Pro Tyr
 35 40 45
 Leu Glu Pro Tyr Gly Leu Val Tyr Cys Val Asn Cys Ile Cys Ser Glu
 50 55 60
 Asn Gly Asn Val Leu Cys Ser Arg Val Arg Cys Pro Thr Leu His Cys
 65 70 75 80
 Leu Ser Pro Val His Ile Pro His Leu Cys Cys Pro Arg Cys Pro Asp
 85 90 95
 Ser Leu Pro Pro Met Asn Asn Lys Val Thr Ser Lys Ser Cys Glu Tyr
 100 105 110
 Asn Gly Thr Thr Tyr Gln His Gly Glu Leu Phe Ile Ala Glu Gly Leu
 115 120 125
 Phe Gln Asn Arg Gln Pro Asn Gln Cys Ser Gln Cys Ser Cys Ser Glu
 130 135 140
 Gly Asn Val Tyr Cys Gly Leu Lys Thr Cys Pro Lys Leu Thr Cys Ala
 145 150 155 160
 Phe Pro Val Ser Val Pro Asp Ser Cys Cys Arg Val Cys Arg Gly Asp
 165 170 175
 Gly Glu Leu Ser Trp Glu His Ser Asp Ala Asp Ile Phe Arg Gln Pro
 180 185 190
 Ala Asn Arg Glu Ala Arg His Ser Tyr Leu Arg Ser Pro Tyr Asp Pro
 195 200 205

85

90

95

His Gly Glu Leu Phe Ile Ala Glu Gly Leu Phe Gln Asn Arg Gln Pro
100 105 110

Asn Gln Cys Ser Gln Cys Ser Cys Ser Glu Gly Asn Val Tyr Cys Gly
115 120 125

Leu Lys Thr Cys Pro Lys Leu Thr Cys Ala Phe Pro Val Ser Val Pro
130 135 140

Asp Ser Cys Cys Arg Val Cys Arg Gly Asp Ala Glu Leu Ser Trp Glu
145 150 155 160

His Ala Asp Gly Asp Ile Phe Arg Gln Pro Ala Asn Arg Glu Ala Arg
165 170 175

His Ser Tyr Leu Arg Ser Pro Tyr Asp Pro Pro Pro Asn Arg Gln Ala
180 185 190

Gly Gly Leu Pro Arg Phe Pro Gly Ser Arg Ser His Arg Gly Ala Val
195 200 205

Ile Asp Ser Gln Gln Ala Ser Gly Thr Ile Val Gln Ile Val Ile Asn
210 215 220

Asn Lys His Lys His Gly Gln Val Cys Val Ser Asn Gly Lys Thr Tyr
225 230 235 240

Ser His Gly Glu Ser Trp His Pro Asn Leu Arg Ala Phe Gly Ile Val
245 250 255

Glu Cys Val Leu Cys Thr Cys Asn Val Thr Lys Gln Glu Cys Lys Lys
260 265 270

Ile His Cys Pro Asn Arg Tyr Pro Cys Lys Tyr Pro Gln Lys Ile Asp
275 280 285

Gly Lys Cys Cys Lys Val Cys Pro Gly Lys Lys Ala Lys Gly Ala Leu
290 295 300

Ala Gly Gly Pro Ala Phe Gly
305 310

<210> 8

<211> 345

<212> PRT

<213> Mus musculus

<400> 8

Met Asp Gly Met Lys Tyr Ile Ile Ser Leu Phe Phe Ile Phe Val Phe
1 5 10 15

Leu Glu Gly Ser Lys Thr Glu Gln Val Lys His Ser Asp Thr Tyr Cys
20 25 30

Thr Asp Tyr Lys Asp Asp Asp Asp Lys
 340 345

<210> 9
 <211> 323
 <212> PRT
 <213> Mus musculus

<400> 9
 Glu Gln Val Lys His Ser Asp Thr Tyr Cys Val Phe Gln Asp Lys Lys
 1 5 10 15

Tyr Arg Val Gly Glu Lys Trp His Pro Tyr Leu Glu Pro Tyr Gly Leu
 20 25 30

Val Tyr Cys Val Asn Cys Ile Cys Ser Glu Asn Gly Asn Val Leu Cys
 35 40 45

Ser Arg Val Arg Cys Pro Ser Leu His Cys Leu Ser Pro Val His Ile
 50 55 60

Pro His Leu Cys Cys Pro Arg Cys Pro Asp Ser Leu Pro Pro Val Asn
 65 70 75 80

Asn Lys Val Thr Ser Lys Ser Cys Glu Tyr Asn Gly Thr Thr Tyr Gln
 85 90 95

His Gly Glu Leu Phe Ile Ala Glu Gly Leu Phe Gln Asn Arg Gln Pro
 100 105 110

Asn Gln Cys Ser Gln Cys Ser Cys Ser Glu Gly Asn Val Tyr Cys Gly
 115 120 125

Leu Lys Thr Cys Pro Lys Leu Thr Cys Ala Phe Pro Val Ser Val Pro
 130 135 140

Asp Ser Cys Cys Arg Val Cys Arg Gly Asp Ala Glu Leu Ser Trp Glu
 145 150 155 160

His Ala Asp Gly Asp Ile Phe Arg Gln Pro Ala Asn Arg Glu Ala Arg
 165 170 175

His Ser Tyr Leu Arg Ser Pro Tyr Asp Pro Pro Pro Asn Arg Gln Ala
 180 185 190

Gly Gly Leu Pro Arg Phe Pro Gly Ser Arg Ser His Arg Gly Ala Val
 195 200 205

Ile Asp Ser Gln Gln Ala Ser Gly Thr Ile Val Gln Ile Val Ile Asn
 210 215 220

Asn Lys His Lys His Gly Gln Val Cys Val Ser Asn Gly Lys Thr Tyr
 225 230 235 240

Ser His Gly Glu Ser Trp His Pro Asn Leu Arg Ala Phe Gly Ile Val
 245 250 255

Glu Cys Val Leu Cys Thr Cys Asn Val Thr Lys Gln Glu Cys Lys Lys
 260 265 270
 Ile His Cys Pro Asn Arg Tyr Pro Cys Lys Tyr Pro Gln Lys Ile Asp
 275 280 285
 Gly Lys Cys Cys Lys Val Cys Pro Gly Lys Lys Ala Lys Gly Ala Leu
 290 295 300
 Ala Gly Gly Pro Ala Phe Gly Gly Ser Gly Thr Asp Tyr Lys Asp Asp
 305 310 315 320
 Asp Asp Lys

<210> 10
 <211> 962
 <212> PRT
 <213> Mus musculus

<400> 10

Met Pro Ser Leu Pro Ala Pro Pro Ala Pro Arg Leu Leu Leu Gly Leu
 1 5 10 15
 Leu Leu Leu Gly Ser Arg Pro Ala Ser Gly Thr Gly Pro Glu Pro Pro
 20 25 30
 Ala Leu Pro Ile Arg Ser Glu Lys Glu Pro Leu Pro Val Arg Gly Ala
 35 40 45
 Ala Gly Cys Ser Phe Gly Gly Lys Val Tyr Ala Leu Asp Glu Thr Trp
 50 55 60
 His Pro Asp Leu Gly Glu Pro Phe Gly Val Met Arg Cys Val Leu Cys
 65 70 75 80
 Ala Cys Glu Ala Pro Gln Trp Ala Arg Arg Gly Arg Gly Pro Gly Arg
 85 90 95
 Val Ser Cys Lys Asn Ile Lys Pro Gln Cys Pro Thr Leu Ala Cys Arg
 100 105 110
 Gln Pro Arg Gln Leu Pro Gly His Cys Cys Gln Thr Cys Pro Gln Glu
 115 120 125
 Arg Ser Asn Leu Asp Pro Gln Pro Ala Gly Leu Val Phe Glu Tyr Pro
 130 135 140
 Arg Asp Pro Glu His Arg Ser Tyr Ser Asp Arg Gly Glu Pro Gly Val
 145 150 155 160
 Gly Glu Arg Thr Arg Ala Asp Gly His Thr Asp Phe Val Ala Leu Leu
 165 170 175
 Thr Gly Pro Arg Ser Gln Ala Val Ala Arg Ala Arg Val Ser Leu Leu

			180				185				190				
Arg	Ser	Ser	Leu	Arg	Phe	Ser	Val	Ser	Tyr	Gln	Arg	Leu	Asp	Arg	Pro
		195					200					205			
Ser	Arg	Val	Arg	Phe	Thr	Asp	Pro	Thr	Gly	Asn	Ile	Leu	Phe	Glu	His
		210					215					220			
Pro	Ala	Thr	Pro	Thr	Gln	Asp	Gly	Leu	Val	Cys	Gly	Val	Trp	Arg	Ala
225					230					235					
Val	Pro	Arg	Leu	Ser	Val	Arg	Leu	Leu	Arg	Ala	Glu	Gln	Leu	Arg	Val
				245					250					255	
Ala	Leu	Val	Thr	Ser	Thr	His	Pro	Ser	Gly	Glu	Val	Trp	Gly	Pro	Leu
				260					265					270	
Ile	Trp	Gln	Gly	Ala	Leu	Ala	Ala	Glu	Thr	Phe	Ser	Ala	Ile	Leu	Thr
		275					280					285			
Leu	Glu	Asp	Pro	Leu	Gln	Arg	Gly	Val	Gly	Gly	Ile	Ala	Leu	Leu	Thr
		290					295					300			
Leu	Ser	Asp	Thr	Glu	Asp	Ser	Leu	His	Phe	Leu	Leu	Leu	Phe	Arg	Gly
305					310					315					
Leu	Leu	Gly	Gly	Leu	Ala	Gln	Ala	Pro	Leu	Lys	Leu	Gln	Ile	Leu	His
				325					330					335	
Gln	Gly	Gln	Leu	Leu	Arg	Glu	Leu	Gln	Ala	Asn	Thr	Ser	Ala	Gln	Glu
				340					345					350	
Pro	Gly	Phe	Ala	Glu	Val	Leu	Pro	Ser	Leu	Thr	Asp	Gln	Glu	Met	Asp
		355					360					365			
Trp	Leu	Glu	Leu	Gly	Glu	Leu	Gln	Met	Val	Leu	Glu	Lys	Ala	Gly	Gly
		370					375					380			
Pro	Glu	Leu	Arg	Ile	Ser	Gly	Tyr	Ile	Thr	Thr	Arg	Gln	Ser	Cys	Asp
385					390					395					
Val	Leu	Gln	Ser	Val	Leu	Cys	Gly	Ala	Asp	Ala	Leu	Ile	Pro	Val	Gln
				405					410					415	
Thr	Gly	Ala	Ala	Gly	Ser	Ala	Ser	Phe	Ile	Leu	Leu	Gly	Asn	Gly	Ser
				420					425					430	
Leu	Ile	Tyr	Gln	Val	Gln	Val	Val	Gly	Thr	Gly	Ser	Glu	Val	Val	Ala
		435					440					445			
Met	Thr	Leu	Glu	Thr	Lys	Pro	Gln	Arg	Lys	Asn	Gln	Arg	Thr	Val	Leu
		450					455					460			
Cys	His	Met	Ala	Gly	Leu	Gln	Pro	Gly	Gly	His	Met	Ala	Val	Gly	Met
465					470					475					
Cys	Ser	Gly	Leu	Gly	Ala	Arg	Gly	Ala	His	Met	Leu	Leu	Gln	Asn	Glu

785					790						795					800
Phe	Gly	Leu	Ile	Lys	Cys	Ala	Val	Cys	Thr	Cys	Lys	Gly	Ala	Thr	Gly	
				805					810					815		
Glu	Val	His	Cys	Glu	Lys	Val	Gln	Cys	Pro	Arg	Leu	Ala	Cys	Ala	Gln	
			820					825					830			
Pro	Val	Arg	Ala	Asn	Pro	Thr	Asp	Cys	Cys	Lys	Gln	Cys	Pro	Val	Gly	
		835					840					845				
Ser	Gly	Thr	Asn	Ala	Lys	Leu	Gly	Asp	Pro	Met	Gln	Ala	Asp	Gly	Pro	
	850					855					860					
Arg	Gly	Cys	Arg	Phe	Ala	Gly	Gln	Trp	Phe	Pro	Glu	Asn	Gln	Ser	Trp	
865					870					875					880	
His	Pro	Ser	Val	Pro	Pro	Phe	Gly	Glu	Met	Ser	Cys	Ile	Thr	Cys	Arg	
				885					890					895		
Cys	Gly	Ala	Gly	Val	Pro	His	Cys	Glu	Arg	Asp	Asp	Cys	Ser	Pro	Pro	
			900					905					910			
Leu	Ser	Cys	Gly	Ser	Gly	Lys	Glu	Ser	Arg	Cys	Cys	Ser	His	Cys	Thr	
		915					920					925				
Ala	Gln	Arg	Ser	Ser	Glu	Thr	Arg	Thr	Leu	Pro	Glu	Leu	Glu	Lys	Glu	
	930					935					940					
Ala	Glu	His	Ser	Val	Asp	Gly	Ser	Gly	Thr	Asp	Tyr	Lys	Asp	Asp	Asp	
945					950					955					960	
Asp	Lys															

<210> 11
 <211> 431
 <212> PRT
 <213> Homo sapiens

<400> 11
 Glu Gln Val Lys His Ser Glu Thr Tyr Cys Met Phe Gln Asp Lys Lys
 1 5 10 15
 Tyr Arg Val Gly Glu Arg Trp His Pro Tyr Leu Glu Pro Tyr Gly Leu
 20 25 30
 Val Tyr Cys Val Asn Cys Ile Cys Ser Glu Asn Gly Asn Val Leu Cys
 35 40 45
 Ser Arg Val Arg Cys Pro Asn Val His Cys Leu Ser Pro Val His Ile
 50 55 60
 Pro His Leu Cys Cys Pro Arg Cys Pro Glu Asp Ser Leu Pro Pro Val
 65 70 75 80

Arg Thr Thr Leu Ser Gln Trp Lys Ile Phe Thr Glu Gly Glu Ala Gln
385 390 395 400

Ile Ser Gln Met Cys Ser Ser Arg Val Cys Arg Thr Glu Leu Glu Asp
405 410 415

Leu Val Lys Val Leu Tyr Leu Glu Arg Ser Glu Lys Gly His Cys
420 425 430

<210> 12

<211> 434

<212> PRT

<213> Homo sapiens

<400> 12

Gly Lys Thr Glu Gln Val Lys His Ser Glu Thr Tyr Cys Met Phe Gln
1 5 10 15

Asp Lys Lys Tyr Arg Val Gly Glu Arg Trp His Pro Tyr Leu Glu Pro
20 25 30

Tyr Gly Leu Val Tyr Cys Val Asn Cys Ile Cys Ser Glu Asn Gly Asn
35 40 45

Val Leu Cys Ser Arg Val Arg Cys Pro Asn Val His Cys Leu Ser Pro
50 55 60

Val His Ile Pro His Leu Cys Cys Pro Arg Cys Pro Glu Asp Ser Leu
65 70 75 80

Pro Pro Val Asn Asn Lys Val Thr Ser Lys Ser Cys Glu Tyr Asn Gly
85 90 95

Thr Thr Tyr Gln His Gly Glu Leu Phe Val Ala Glu Gly Leu Phe Gln
100 105 110

Asn Arg Gln Pro Asn Gln Cys Thr Gln Cys Ser Cys Ser Glu Gly Asn
115 120 125

Val Tyr Cys Gly Leu Lys Thr Cys Pro Lys Leu Thr Cys Ala Phe Pro
130 135 140

Val Ser Val Pro Asp Ser Cys Cys Arg Val Cys Arg Gly Asp Gly Glu
145 150 155 160

Leu Ser Trp Glu His Ser Asp Gly Asp Ile Phe Arg Gln Pro Ala Asn
165 170 175

Arg Glu Ala Arg His Ser Tyr His Arg Ser His Tyr Asp Pro Pro Pro
180 185 190

Ser Arg Gln Ala Gly Gly Leu Ser Arg Phe Pro Gly Ala Arg Ser His
195 200 205

Arg Gly Ala Leu Met Asp Ser Gln Gln Ala Ser Gly Thr Ile Val Gln
210 215 220

Ile	Val	Ile	Asn	Asn	Lys	His	Lys	His	Gly	Gln	Val	Cys	Val	Ser	Asn	
225					230					235					240	
Gly	Lys	Thr	Tyr	Ser	His	Gly	Glu	Ser	Trp	His	Pro	Asn	Leu	Arg	Ala	
				245					250					255		
Phe	Gly	Ile	Val	Glu	Cys	Val	Leu	Cys	Thr	Cys	Asn	Val	Thr	Lys	Gln	
			260					265					270			
Glu	Cys	Lys	Lys	Ile	His	Cys	Pro	Asn	Arg	Tyr	Pro	Cys	Lys	Tyr	Pro	
		275					280					285				
Gln	Lys	Ile	Asp	Gly	Lys	Cys	Cys	Lys	Val	Cys	Pro	Gly	Lys	Lys	Ala	
		290				295					300					
Lys	Glu	Glu	Leu	Pro	Gly	Gln	Ser	Phe	Asp	Asn	Lys	Gly	Tyr	Phe	Cys	
305					310					315					320	
Gly	Glu	Glu	Thr	Met	Pro	Val	Tyr	Glu	Ser	Val	Phe	Met	Glu	Asp	Gly	
				325					330					335		
Glu	Thr	Thr	Arg	Lys	Ile	Ala	Leu	Glu	Thr	Glu	Arg	Pro	Pro	Gln	Val	
			340					345					350			
Glu	Val	His	Val	Trp	Thr	Ile	Arg	Lys	Gly	Ile	Leu	Gln	His	Phe	His	
		355					360					365				
Ile	Glu	Lys	Ile	Ser	Lys	Arg	Met	Phe	Glu	Glu	Leu	Pro	His	Phe	Lys	
	370					375					380					
Leu	Val	Thr	Arg	Thr	Thr	Leu	Ser	Gln	Trp	Lys	Ile	Phe	Thr	Glu	Gly	
385					390					395					400	
Glu	Ala	Gln	Ile	Ser	Gln	Met	Cys	Ser	Ser	Arg	Val	Cys	Arg	Thr	Glu	
				405					410					415		
Leu	Glu	Asp	Leu	Val	Lys	Val	Leu	Tyr	Leu	Glu	Arg	Ser	Glu	Lys	Gly	
			420					425					430			

His Cys

<210> 13
 <211> 360
 <212> PRT
 <213> Rattus norvegicus

<400> 13
 Glu Pro Val Lys His Ser Glu Thr Tyr Cys Met Phe Gln Asp Lys Lys
 1 5 10 15
 Tyr Arg Val Gly Glu Lys Trp His Pro Tyr Leu Glu Pro Tyr Gly Leu
 20 25 30
 Val Tyr Cys Val Asn Cys Ile Cys Ser Glu Asn Gly Asn Val Leu Cys

35					40					45						
Ser	Arg	Val	Arg	Cys	Pro	Thr	Leu	His	Cys	Leu	Ser	Pro	Val	His	Ile	
50					55					60						
Pro	His	Leu	Cys	Cys	Pro	Arg	Cys	Pro	Asp	Ser	Leu	Pro	Pro	Met	Asn	
65					70					75					80	
Asn	Lys	Val	Thr	Ser	Lys	Ser	Cys	Glu	Tyr	Asn	Gly	Thr	Thr	Tyr	Gln	
85					90					95						
His	Gly	Glu	Leu	Phe	Ile	Ala	Glu	Gly	Leu	Phe	Gln	Asn	Arg	Gln	Pro	
100					105					110						
Asn	Gln	Cys	Ser	Gln	Cys	Ser	Cys	Ser	Glu	Gly	Asn	Val	Tyr	Cys	Gly	
115					120					125						
Leu	Lys	Thr	Cys	Pro	Lys	Leu	Thr	Cys	Ala	Phe	Pro	Val	Ser	Val	Pro	
130					135					140						
Asp	Ser	Cys	Cys	Arg	Val	Cys	Arg	Gly	Asp	Gly	Glu	Leu	Ser	Trp	Glu	
145					150					155					160	
His	Ser	Asp	Ala	Asp	Ile	Phe	Arg	Gln	Pro	Ala	Asn	Arg	Glu	Ala	Arg	
165					170					175						
His	Ser	Tyr	Leu	Arg	Ser	Pro	Tyr	Asp	Pro	Pro	Pro	Ser	Arg	Gln	Ala	
180					185					190						
Gly	Gly	Leu	Pro	Arg	Phe	Ala	Gly	Ser	Arg	Ser	His	Arg	Gly	Ala	Val	
195					200					205						
Ile	Asp	Ser	Gln	Gln	Ala	Ser	Gly	Thr	Ile	Val	Gln	Ile	Val	Ile	Asn	
210					215					220						
Asn	Lys	His	Lys	His	Gly	Gln	Val	Cys	Val	Ser	Asn	Gly	Lys	Thr	Tyr	
225					230					235					240	
Ser	His	Gly	Glu	Ser	Trp	His	Ser	Asn	Leu	Arg	Ala	Phe	Gly	Ile	Val	
245					250					255						
Glu	Cys	Val	Leu	Cys	Thr	Cys	Asn	Val	Thr	Lys	Gln	Glu	Cys	Lys	Lys	
260					265					270						
Ile	His	Cys	Pro	Asn	Arg	Tyr	Pro	Cys	Lys	Tyr	Pro	Gln	Lys	Leu	Asp	
275					280					285						
Gly	Lys	Cys	Cys	Lys	Val	Cys	Pro	Glu	Glu	Pro	Pro	Ser	Gln	Asn	Phe	
290					295					300						
Asp	Ser	Lys	Gly	Ser	Phe	Cys	Gly	Glu	Glu	Thr	Met	Pro	Val	Tyr	Glu	
305					310					315					320	
Ala	Val	Leu	Val	Glu	Asp	Gly	Glu	Thr	Ala	Arg	Lys	Val	Ala	Leu	Glu	
325					330					335						
Thr	Glu	Lys	Pro	Pro	Gln	Val	Val	Gly	Ser	Arg	Leu	Asp	Tyr	Ser	Lys	

Sequence: Serine

340

345

350

Gly His Ser Pro Ala Leu Pro His
 355 360

<210> 14
 <211> 20
 <212> DNA
 <213> Mus musculus

<400> 14
 agtgcccagc tttagtccac 20

<210> 15
 <211> 20
 <212> DNA
 <213> Mus musculus

<400> 15
 gagatgagga atatgcacgg 20

<210> 16
 <211> 18
 <212> DNA
 <213> Homo sapiens

<400> 16
 gacatctgac tcggctgc 18

<210> 17
 <211> 17
 <212> DNA
 <213> Homo sapiens

<400> 17
 tcacgcagta aaccaac 17

<210> 18
 <211> 948
 <212> PRT
 <213> Mus musculus

<400> 18
 Met Pro Ser Leu Pro Ala Pro Pro Ala Pro Arg Leu Leu Leu Gly Leu
 1 5 10 15

Leu Leu Leu Gly Ser Arg Pro Ala Ser Gly Thr Gly Pro Glu Pro Pro
 20 25 30

Ala Leu Pro Ile Arg Ser Glu Lys Glu Pro Leu Pro Val Arg Gly Ala
 35 40 45

Ala	Gly	Cys	Ser	Phe	Gly	Gly	Lys	Val	Tyr	Ala	Leu	Asp	Glu	Thr	Trp	
50						55					60					
His	Pro	Asp	Leu	Gly	Glu	Pro	Phe	Gly	Val	Met	Arg	Cys	Val	Leu	Cys	
65					70					75					80	
Ala	Cys	Glu	Ala	Pro	Gln	Trp	Ala	Arg	Arg	Gly	Arg	Gly	Pro	Gly	Arg	
				85					90					95		
Val	Ser	Cys	Lys	Asn	Ile	Lys	Pro	Gln	Cys	Pro	Thr	Leu	Ala	Cys	Arg	
			100					105					110			
Gln	Pro	Arg	Gln	Leu	Pro	Gly	His	Cys	Cys	Gln	Thr	Cys	Pro	Gln	Glu	
		115					120					125				
Arg	Ser	Asn	Leu	Asp	Pro	Gln	Pro	Ala	Gly	Leu	Val	Phe	Glu	Tyr	Pro	
		130				135					140					
Arg	Asp	Pro	Glu	His	Arg	Ser	Tyr	Ser	Asp	Arg	Gly	Glu	Pro	Gly	Val	
145					150					155					160	
Gly	Glu	Arg	Thr	Arg	Ala	Asp	Gly	His	Thr	Asp	Phe	Val	Ala	Leu	Leu	
				165					170					175		
Thr	Gly	Pro	Arg	Ser	Gln	Ala	Val	Ala	Arg	Ala	Arg	Val	Ser	Leu	Leu	
			180					185					190			
Arg	Ser	Ser	Leu	Arg	Phe	Ser	Val	Ser	Tyr	Gln	Arg	Leu	Asp	Arg	Pro	
		195					200					205				
Ser	Arg	Val	Arg	Phe	Thr	Asp	Pro	Thr	Gly	Asn	Ile	Leu	Phe	Glu	His	
		210				215					220					
Pro	Ala	Thr	Pro	Thr	Gln	Asp	Gly	Leu	Val	Cys	Gly	Val	Trp	Arg	Ala	
225					230					235					240	
Val	Pro	Arg	Leu	Ser	Val	Arg	Leu	Leu	Arg	Ala	Glu	Gln	Leu	Arg	Val	
				245					250					255		
Ala	Leu	Val	Thr	Ser	Thr	His	Pro	Ser	Gly	Glu	Val	Trp	Gly	Pro	Leu	
			260					265					270			
Ile	Trp	Gln	Gly	Ala	Leu	Ala	Ala	Glu	Thr	Phe	Ser	Ala	Ile	Leu	Thr	
		275					280					285				
Leu	Glu	Asp	Pro	Leu	Gln	Arg	Gly	Val	Gly	Gly	Ile	Ala	Leu	Leu	Thr	
	290					295					300					
Leu	Ser	Asp	Thr	Glu	Asp	Ser	Leu	His	Phe	Leu	Leu	Leu	Phe	Arg	Gly	
305					310					315					320	
Leu	Leu	Gly	Gly	Leu	Ala	Gln	Ala	Pro	Leu	Lys	Leu	Gln	Ile	Leu	His	
				325					330					335		
Gln	Gly	Gln	Leu	Leu	Arg	Glu	Leu	Gln	Ala	Asn	Thr	Ser	Ala	Gln	Glu	
			340					345						350		

Glu	Gly	Val	Gln	Met	Pro	Leu	Ala	Pro	Asn	Gly	Glu	Ala	Ala	Thr	Ser	
			660					665					670			
Pro	Met	Leu	Pro	Ala	Gly	Pro	Gly	Pro	Glu	Ala	Pro	Val	Pro	Ala	Lys	
		675					680					685				
His	Gly	Ser	Pro	Gly	Arg	Pro	Arg	Asp	Pro	Asn	Thr	Cys	Phe	Phe	Glu	
	690					695					700					
Gly	Gln	Gln	Arg	Pro	His	Gly	Ala	Arg	Trp	Ala	Pro	Asn	Tyr	Asp	Pro	
705					710					715					720	
Leu	Cys	Ser	Leu	Cys	Ile	Cys	Gln	Arg	Arg	Thr	Val	Ile	Cys	Asp	Pro	
				725					730					735		
Val	Val	Cys	Pro	Pro	Pro	Ser	Cys	Pro	His	Pro	Val	Gln	Ala	Leu	Asp	
			740					745					750			
Gln	Cys	Cys	Pro	Val	Cys	Pro	Glu	Lys	Gln	Arg	Ser	Arg	Asp	Leu	Pro	
		755					760					765				
Ser	Leu	Pro	Asn	Leu	Glu	Pro	Gly	Glu	Gly	Cys	Tyr	Phe	Asp	Gly	Asp	
	770					775					780					
Arg	Ser	Trp	Arg	Ala	Ala	Gly	Thr	Arg	Trp	His	Pro	Val	Val	Pro	Pro	
785					790					795					800	
Phe	Gly	Leu	Ile	Lys	Cys	Ala	Val	Cys	Thr	Cys	Lys	Gly	Ala	Thr	Gly	
				805					810					815		
Glu	Val	His	Cys	Glu	Lys	Val	Gln	Cys	Pro	Arg	Leu	Ala	Cys	Ala	Gln	
			820					825					830			
Pro	Val	Arg	Ala	Asn	Pro	Thr	Asp	Cys	Cys	Lys	Gln	Cys	Pro	Val	Gly	
		835					840					845				
Ser	Gly	Thr	Asn	Ala	Lys	Leu	Gly	Asp	Pro	Met	Gln	Ala	Asp	Gly	Pro	
	850					855					860					
Arg	Gly	Cys	Arg	Phe	Ala	Gly	Gln	Trp	Phe	Pro	Glu	Asn	Gln	Ser	Trp	
865					870					875					880	
His	Pro	Ser	Val	Pro	Pro	Phe	Gly	Glu	Met	Ser	Cys	Ile	Thr	Cys	Arg	
				885					890					895		
Cys	Gly	Ala	Gly	Val	Pro	His	Cys	Glu	Arg	Asp	Asp	Cys	Ser	Pro	Pro	
			900					905					910			
Leu	Ser	Cys	Gly	Ser	Gly	Lys	Glu	Ser	Arg	Cys	Cys	Ser	His	Cys	Thr	
		915					920					925				
Ala	Gln	Arg	Ser	Ser	Glu	Thr	Arg	Thr	Leu	Pro	Glu	Leu	Glu	Lys	Glu	
						935					940					
Ala	Glu	His	Ser													
945																

<210> 19
 <211> 176
 <212> PRT
 <213> Rattus norvegicus

<400> 19

Gly Gly Leu Arg Leu Ala Ser Glu Gly Val Arg Met Ser Leu Ala Pro
 1 5 10 15

Asn Gly Glu Ala Ala Thr Ser Pro Met Leu Pro Ala Gly Pro Gly Pro
 20 25 30

Glu Ala Pro Val Pro Ala Lys His Gly Ser Ser Gly Arg Pro Arg Asp
 35 40 45

Pro Asn Thr Cys Phe Phe Glu Gly Gln Gln Arg Pro His Gly Ala Arg
 50 55 60

Trp Ala Pro Asn Tyr Asp Pro Leu Cys Ser Leu Cys Thr Cys Gln Arg
 65 70 75 80

Arg Thr Val Ile Cys Asp Pro Val Val Cys Pro Pro Pro Arg Cys Ser
 85 90 95

Gln Pro Val Gln Ala Leu Asp Gln Trp Cys Pro Val Cys Ser Glu Lys
 100 105 110

Gln Arg Ser Arg Asp Leu Ser Ser Leu Pro Asn Leu Glu Pro Gly Glu
 115 120 125

Gly Cys Tyr Phe Asp Gly Asp Arg Ser Trp Arg Ala Ala Gly Thr Arg
 130 135 140

Trp His Pro Val Val Pro Pro Phe Gly Leu Ile Lys Cys Gly Val Cys
 145 150 155 160

Thr Cys Lys Gly Val Asn Gly Glu Val His Ser Glu Lys Val Gln Cys
 165 170 175

<210> 20
 <211> 801
 <212> PRT
 <213> Homo sapiens

<400> 20

Gln Val Ala Ala Gly His Cys Cys Gln Thr Cys Pro Gln Glu Arg Ser
 1 5 10 15

Ser Ser Glu Arg Gln Pro Ser Gly Leu Ser Phe Glu Tyr Pro Arg Asp
 20 25 30

Pro Glu His Arg Ser Tyr Ser Asp Arg Gly Glu Pro Gly Ala Glu Glu

35					40					45								
Arg	Ala	Arg	Gly	Asp	Gly	His	Thr	Asp	Phe	Val	Ala	Leu	Leu	Thr	Gly			
50					55					60								
Pro	Arg	Ser	Gln	Ala	Val	Ala	Arg	Ala	Arg	Ala	Ser	Leu	Leu	Arg	Ser			
65					70					75					80			
Ser	Leu	Arg	Phe	Ser	Ile	Ser	Tyr	Arg	Arg	Leu	Asp	Arg	Pro	Thr	Arg			
					85					90					95			
Ile	Arg	Phe	Ser	Asp	Pro	Asn	Gly	Ser	Val	Leu	Phe	Glu	His	Pro	Ala			
					100					105					110			
Ala	Pro	Thr	Gln	Asp	Gly	Leu	Val	Cys	Gly	Val	Trp	Arg	Ala	Val	Pro			
					115					120					125			
Arg	Leu	Ser	Leu	Arg	Leu	Leu	Arg	Ala	Glu	Gln	Leu	His	Val	Ala	Leu			
					130					135					140			
Val	Thr	Leu	Thr	His	Pro	Ser	Gly	Glu	Val	Trp	Gly	Pro	Leu	Ile	Arg			
					145					150					155		160	
His	Arg	Ala	Leu	Ala	Ala	Glu	Thr	Phe	Ser	Ala	Ile	Leu	Thr	Leu	Glu			
					165					170					175			
Gly	Pro	Pro	Gln	Gln	Gly	Val	Gly	Gly	Ile	Thr	Leu	Leu	Thr	Leu	Ser			
					180					185					190			
Asp	Thr	Glu	Asp	Ser	Leu	His	Phe	Leu	Leu	Leu	Phe	Arg	Gly	Leu	Leu			
					195					200					205			
Glu	Pro	Arg	Ser	Gly	Gly	Leu	Thr	Gln	Val	Pro	Leu	Arg	Leu	Gln	Ile			
					210					215					220			
Leu	His	Gln	Gly	Gln	Leu	Leu	Arg	Glu	Leu	Gln	Ala	Asn	Val	Ser	Ala			
					225					230					235		240	
Gln	Glu	Pro	Gly	Phe	Ala	Glu	Val	Leu	Pro	Asn	Leu	Thr	Val	Gln	Glu			
					245					250					255			
Met	Asp	Trp	Leu	Val	Leu	Gly	Glu	Leu	Gln	Met	Ala	Leu	Glu	Trp	Ala			
					260					265					270			
Gly	Arg	Pro	Gly	Leu	Arg	Ile	Ser	Gly	His	Ile	Ala	Ala	Arg	Lys	Ser			
					275					280					285			
Cys	Asp	Val	Leu	Gln	Ser	Val	Leu	Cys	Gly	Ala	Asp	Ala	Leu	Ile	Pro			
					290					295					300			
Val	Gln	Thr	Gly	Ala	Ala	Gly	Ser	Ala	Ser	Leu	Thr	Leu	Leu	Gly	Asn			
					305					310					315		320	
Gly	Ser	Leu	Ile	Tyr	Gln	Ala	Val	Gly	Ile	Cys	Pro	Gly	Leu	Gly	Ala			
					325					330					335			
Arg	Gly	Ala	His	Met	Leu	Leu	Gln	Asn	Glu	Leu	Phe	Leu	Asn	Val	Gly			

	340						345						350					
Thr	Lys	Asp 355	Phe	Pro	Asp	Gly	Glu 360	Leu	Arg	Gly	His	Val 365	Ala	Ala	Leu			
Pro	Tyr 370	Cys	Gly	His	Ser	Ala 375	Arg	His	Asp	Thr	Leu 380	Pro	Val	Pro	Leu			
Ala 385	Gly	Ala	Leu	Val	Leu 390	Pro	Pro	Val	Lys	Ser 395	Gln	Ala	Ala	Gly	His 400			
Ala	Trp	Leu	Ser	Leu 405	Asp	Thr	His	Cys	His 410	Leu	His	Tyr	Glu	Val 415	Leu			
Leu	Ala	Gly	Leu 420	Gly	Gly	Ser	Glu	Gln 425	Gly	Thr	Val	Thr	Ala 430	His	Leu			
Leu	Gly	Pro 435	Pro	Gly	Thr	Pro	Gly 440	Pro	Arg	Arg	Leu 445	Leu	Lys	Gly	Phe			
Tyr	Gly 450	Ser	Glu	Ala	Gln	Gly 455	Val	Val	Lys	Asp	Leu 460	Glu	Pro	Glu	Leu			
Leu 465	Arg	His	Leu	Ala	Lys 470	Gly	Met	Ala	Ser	Leu 475	Leu	Ile	Thr	Thr	Lys 480			
Gly	Ser	Pro	Arg 485	Gly	Glu	Leu	Arg	Gly	Gln 490	Val	His	Ile	Ala	Asn 495	Gln			
Cys	Glu	Val 500	Gly	Gly	Leu	Arg	Leu	Glu 505	Ala	Ala	Gly	Ala	Glu 510	Gly	Val			
Arg	Ala	Leu 515	Gly	Ala	Pro	Asp	Pro 520	Ala	Ser	Ala	Ala	Pro 525	Pro	Val	Val			
Pro	Gly 530	Leu	Pro	Ala	Leu	Ala 535	Pro	Ala	Lys	Pro	Gly 540	Gly	Pro	Gly	Arg			
Pro 545	Arg	Asp	Pro	Asn	Thr 550	Cys	Phe	Phe	Glu	Gly 555	Gln	Gln	Arg	Pro	His 560			
Gly	Ala	Arg	Trp 565	Ala	Pro	Asn	Tyr	Asp	Pro 570	Leu	Cys	Ser	Leu 575	Cys	Thr			
Cys	Gln	Arg	Arg 580	Thr	Val	Ile	Cys	Asp 585	Pro	Val	Val	Cys	Pro 590	Pro	Pro			
Ser	Cys	Pro 595	His	Pro	Val	Gln	Ala 600	Pro	Asp	Gln	Cys	Cys 605	Pro	Val	Cys			
Pro	Glu 610	Lys	Gln	Asp	Val	Arg 615	Asp	Leu	Pro	Gly	Leu 620	Pro	Arg	Ser	Arg			
Asp 625	Pro	Gly	Glu	Gly	Cys 630	Tyr	Phe	Asp	Gly	Asp 635	Arg	Ser	Trp	Arg	Ala 640			
Ala	Gly	Thr	Arg	Trp	His	Pro	Val	Val	Pro	Pro	Phe	Gly	Leu	Ile	Lys			

645					650					655									
Cys	Ala	Val	Cys	Thr	Cys	Lys	Gly	Gly	Thr	Gly	Glu	Val	His	Cys	Glu				
660					665					670									
Lys	Val	Gln	Cys	Pro	Arg	Leu	Ala	Cys	Ala	Gln	Pro	Val	Arg	Val	Asn				
675					680					685									
Pro	Thr	Asp	Cys	Cys	Lys	Gln	Cys	Pro	Val	Gly	Ser	Gly	Ala	His	Pro				
690					695					700									
Gln	Leu	Gly	Asp	Pro	Met	Gln	Ala	Asp	Gly	Pro	Arg	Gly	Cys	Arg	Phe				
705					710					715					720				
Ala	Gly	Gln	Trp	Phe	Pro	Glu	Ser	Gln	Ser	Trp	His	Pro	Ser	Val	Pro				
725					730					735									
Pro	Phe	Gly	Glu	Met	Ser	Cys	Ile	Thr	Cys	Arg	Cys	Gly	Ala	Gly	Val				
740					745					750									
Pro	His	Cys	Glu	Arg	Asp	Asp	Cys	Ser	Leu	Pro	Leu	Ser	Cys	Gly	Ser				
755					760					765									
Gly	Lys	Glu	Ser	Arg	Cys	Cys	Ser	Arg	Cys	Thr	Ala	His	Arg	Arg	Pro				
770					775					780									
Ala	Pro	Glu	Thr	Arg	Thr	Asp	Pro	Glu	Leu	Glu	Lys	Glu	Ala	Glu	Gly				
785					790					795					800				
Ser																			

<210> 21
 <211> 44
 <212> DNA
 <213> Mus musculus

<400> 21
 gctagcggcc gcgccaccat ggatggcatg aaatacatca ttcc

44

<210> 22
 <211> 33
 <212> DNA
 <213> Mus musculus

<400> 22
 ggtaccggat ccaccaaagg cagggcctcc agc

33

<210> 23
 <211> 39
 <212> DNA
 <213> Mus musculus

<400> 23

gctagcggcc gcgccaccat gccgagcctc ccggccccg

39

<210> 24

<211> 36

<212> DNA

<213> Mus musculus

<400> 24

ggatccgtcg acggagtgtc ccgcttcttt ctccag

36

<210> 25

<211> 1341

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(1341)

<400> 25

atg gga ggc atg aaa tac atc ttt tcg ttg ttg ttc ttt ctt ttg cta	48
Met Gly Gly Met Lys Tyr Ile Phe Ser Leu Leu Phe Phe Leu Leu Leu	
1 5 10 15	

gaa gga ggc aaa aca gag caa gta aaa cat tca gag aca tat tgc atg	96
Glu Gly Gly Lys Thr Glu Gln Val Lys His Ser Glu Thr Tyr Cys Met	
20 25 30	

ttt caa gac aag aag tac aga gtg ggt gag aga tgg cat cct tac ctg	144
Phe Gln Asp Lys Lys Tyr Arg Val Gly Glu Arg Trp His Pro Tyr Leu	
35 40 45	

gaa cct tat ggg ttg gtt tac tgc gtg aac tgc atc tgc tca gag aat	192
Glu Pro Tyr Gly Leu Val Tyr Cys Val Asn Cys Ile Cys Ser Glu Asn	
50 55 60	

ggg aat gtg ctt tgc agc cga gtc aga tgt cca aat gtt cat tgc ctt	240
Gly Asn Val Leu Cys Ser Arg Val Arg Cys Pro Asn Val His Cys Leu	
65 70 75 80	

tct cct gtg cat att cct cat ctg tgc tgc cct cgc tgc cca gaa gac	288
Ser Pro Val His Ile Pro His Leu Cys Cys Pro Arg Cys Pro Glu Asp	
85 90 95	

tcc tta ccc cca gtg aac aat aag gtg acc agc aag tct tgc gag tac	336
Ser Leu Pro Pro Val Asn Asn Lys Val Thr Ser Lys Ser Cys Glu Tyr	
100 105 110	

aat ggg aca act tac caa cat gga gag ctg ttc gta gct gaa ggg ctc	384
Asn Gly Thr Thr Tyr Gln His Gly Glu Leu Phe Val Ala Glu Gly Leu	
115 120 125	

ttt cag aat cgg caa ccc aat caa tgc acc cag tgc agc tgt tcg gag	432
Phe Gln Asn Arg Gln Pro Asn Gln Cys Thr Gln Cys Ser Cys Ser Glu	
130 135 140	

gga aac gtg tat tgt ggt ctc aag act tgc ccc aaa tta acc tgt gcc	480
Gly Asn Val Tyr Cys Gly Leu Lys Thr Cys Pro Lys Leu Thr Cys Ala	
145 150 155 160	
ttc cca gtc tct gtt cca gat tcc tgc tgc cgg gta tgc aga gga gat	528
Phe Pro Val Ser Val Pro Asp Ser Cys Cys Arg Val Cys Arg Gly Asp	
165 170 175	
gga gaa ctg tca tgg gaa cat tct gat ggt gat atc ttc cgg caa cct	576
Gly Glu Leu Ser Trp Glu His Ser Asp Gly Asp Ile Phe Arg Gln Pro	
180 185 190	
gcc aac aga gaa gca aga cat tct tac cac cgc tct cac tat gat cct	624
Ala Asn Arg Glu Ala Arg His Ser Tyr His Arg Ser His Tyr Asp Pro	
195 200 205	
cca cca agc cga cag gct gga ggt ctg tcc cgc ttt cct ggg gcc aga	672
Pro Pro Ser Arg Gln Ala Gly Gly Leu Ser Arg Phe Pro Gly Ala Arg	
210 215 220	
agt cac cgg gga gct ctt atg gat tcc cag caa gca tca gga acc att	720
Ser His Arg Gly Ala Leu Met Asp Ser Gln Gln Ala Ser Gly Thr Ile	
225 230 235 240	
gtg caa att gtc atc aat aac aaa cac aag cat gga caa gtg tgt gtt	768
Val Gln Ile Val Ile Asn Asn Lys His Lys His Gly Gln Val Cys Val	
245 250 255	
tcc aat gga aag acc tat tct cat ggc gag tcc tgg cac cca aac ctc	816
Ser Asn Gly Lys Thr Tyr Ser His Gly Glu Ser Trp His Pro Asn Leu	
260 265 270	
cgg gca ttt ggc att gtg gag tgt gtg cta tgt act tgt aat gtc acc	864
Arg Ala Phe Gly Ile Val Glu Cys Val Leu Cys Thr Cys Asn Val Thr	
275 280 285	
aag caa gag tgt aag aaa atc cac tgc ccc aat cga tac ccc tgc aag	912
Lys Gln Glu Cys Lys Lys Ile His Cys Pro Asn Arg Tyr Pro Cys Lys	
290 295 300	
tat cct caa aaa ata gac gga aag tgc tgc aag gtg tgt cca gaa gaa	960
Tyr Pro Gln Lys Ile Asp Gly Lys Cys Cys Lys Val Cys Pro Glu Glu	
305 310 315 320	
ctt cca ggc caa agc ttt gac aat aaa ggc tac ttc tgc ggg gaa gaa	1008
Leu Pro Gly Gln Ser Phe Asp Asn Lys Gly Tyr Phe Cys Gly Glu Glu	
325 330 335	
acg atg cct gtg tat gag tct gta ttc atg gag gat ggg gag aca acc	1056
Thr Met Pro Val Tyr Glu Ser Val Phe Met Glu Asp Gly Glu Thr Thr	
340 345 350	
aga aaa ata gca ctg gag act gag aga cca cct cag gta gag gtc cac	1104
Arg Lys Ile Ala Leu Glu Thr Glu Arg Pro Pro Gln Val Glu Val His	
355 360 365	

gtt tgg act att cga aag ggc att ctc cag cac ttc cat att gag aag	1152
Val Trp Thr Ile Arg Lys Gly Ile Leu Gln His Phe His Ile Glu Lys	
370 375 380	
atc tcc aag agg atg ttt gag gag ctt cct cac ttc aag ctg gtg acc	1200
Ile Ser Lys Arg Met Phe Glu Glu Leu Pro His Phe Lys Leu Val Thr	
385 390 395 400	
aga aca acc ctg agc cag tgg aag atc ttc acc gaa gga gaa gct cag	1248
Arg Thr Thr Leu Ser Gln Trp Lys Ile Phe Thr Glu Gly Glu Ala Gln	
405 410 415	
atc agc cag atg tgt tca agt cgt gta tgc aga aca gag ctt gaa gat	1296
Ile Ser Gln Met Cys Ser Ser Arg Val Cys Arg Thr Glu Leu Glu Asp	
420 425 430	
tta gtc aag gtt ttg tac ctg gag aga tct gaa aag ggc cac tgt	1341
Leu Val Lys Val Leu Tyr Leu Glu Arg Ser Glu Lys Gly His Cys	
435 440 445	

<210> 26
 <211> 447
 <212> PRT
 <213> Homo sapiens

<400> 26
Met Gly Gly Met Lys Tyr Ile Phe Ser Leu Leu Phe Phe Leu Leu Leu
1 5 10 15
Glu Gly Gly Lys Thr Glu Gln Val Lys His Ser Glu Thr Tyr Cys Met
20 25 30
Phe Gln Asp Lys Lys Tyr Arg Val Gly Glu Arg Trp His Pro Tyr Leu
35 40 45
Glu Pro Tyr Gly Leu Val Tyr Cys Val Asn Cys Ile Cys Ser Glu Asn
50 55 60
Gly Asn Val Leu Cys Ser Arg Val Arg Cys Pro Asn Val His Cys Leu
65 70 75 80
Ser Pro Val His Ile Pro His Leu Cys Cys Pro Arg Cys Pro Glu Asp
85 90 95
Ser Leu Pro Pro Val Asn Asn Lys Val Thr Ser Lys Ser Cys Glu Tyr
100 105 110
Asn Gly Thr Thr Tyr Gln His Gly Glu Leu Phe Val Ala Glu Gly Leu
115 120 125
Phe Gln Asn Arg Gln Pro Asn Gln Cys Thr Gln Cys Ser Cys Ser Glu
130 135 140
Gly Asn Val Tyr Cys Gly Leu Lys Thr Cys Pro Lys Leu Thr Cys Ala
145 150 155 160

<212> PRT

<213> Homo sapiens

<400> 27

Glu Gln Val Lys His Ser Glu Thr Tyr Cys Met Phe Gln Asp Lys Lys
1 5 10 15
Tyr Arg Val Gly Glu Arg Trp His Pro Tyr Leu Glu Pro Tyr Gly Leu
20 25 30
Val Tyr Cys Val Asn Cys Ile Cys Ser Glu Asn Gly Asn Val Leu Cys
35 40 45
Ser Arg Val Arg Cys Pro Asn Val His Cys Leu Ser Pro Val His Ile
50 55 60
Pro His Leu Cys Cys Pro Arg Cys Pro Glu Asp Ser Leu Pro Pro Val
65 70 75 80
Asn Asn Lys Val Thr Ser Lys Ser Cys Glu Tyr Asn Gly Thr Thr Tyr
85 90 95
Gln His Gly Glu Leu Phe Val Ala Glu Gly Leu Phe Gln Asn Arg Gln
100 105 110
Pro Asn Gln Cys Thr Gln Cys Ser Cys Ser Glu Gly Asn Val Tyr Cys
115 120 125
Gly Leu Lys Thr Cys Pro Lys Leu Thr Cys Ala Phe Pro Val Ser Val
130 135 140
Pro Asp Ser Cys Cys Arg Val Cys Arg Gly Asp Gly Glu Leu Ser Trp
145 150 155 160
Glu His Ser Asp Gly Asp Ile Phe Arg Gln Pro Ala Asn Arg Glu Ala
165 170 175
Arg His Ser Tyr His Arg Ser His Tyr Asp Pro Pro Pro Ser Arg Gln
180 185 190
Ala Gly Gly Leu Ser Arg Phe Pro Gly Ala Arg Ser His Arg Gly Ala
195 200 205
Leu Met Asp Ser Gln Gln Ala Ser Gly Thr Ile Val Gln Ile Val Ile
210 215 220
Asn Asn Lys His Lys His Gly Gln Val Cys Val Ser Asn Gly Lys Thr
225 230 235 240
Tyr Ser His Gly Glu Ser Trp His Pro Asn Leu Arg Ala Phe Gly Ile
245 250 255
Val Glu Cys Val Leu Cys Thr Cys Asn Val Thr Lys Gln Glu Cys Lys
260 265 270
Lys Ile His Cys Pro Asn Arg Tyr Pro Cys Lys Tyr Pro Gln Lys Ile
275 280 285

Val	Tyr	Cys	Gly	Leu	Lys	Thr	Cys	Pro	Lys	Leu	Thr	Cys	Ala	Phe	Pro
130						135					140				
Val	Ser	Val	Pro	Asp	Ser	Cys	Cys	Arg	Val	Cys	Arg	Gly	Asp	Gly	Glu
145					150					155					160
Leu	Ser	Trp	Glu	His	Ser	Asp	Gly	Asp	Ile	Phe	Arg	Gln	Pro	Ala	Asn
				165					170					175	
Arg	Glu	Ala	Arg	His	Ser	Tyr	His	Arg	Ser	His	Tyr	Asp	Pro	Pro	Pro
			180					185					190		
Ser	Arg	Gln	Ala	Gly	Gly	Leu	Ser	Arg	Phe	Pro	Gly	Ala	Arg	Ser	His
		195					200					205			
Arg	Gly	Ala	Leu	Met	Asp	Ser	Gln	Gln	Ala	Ser	Gly	Thr	Ile	Val	Gln
	210					215					220				
Ile	Val	Ile	Asn	Asn	Lys	His	Lys	His	Gly	Gln	Val	Cys	Val	Ser	Asn
225					230					235					240
Gly	Lys	Thr	Tyr	Ser	His	Gly	Glu	Ser	Trp	His	Pro	Asn	Leu	Arg	Ala
				245					250					255	
Phe	Gly	Ile	Val	Glu	Cys	Val	Leu	Cys	Thr	Cys	Asn	Val	Thr	Lys	Gln
			260					265					270		
Glu	Cys	Lys	Lys	Ile	His	Cys	Pro	Asn	Arg	Tyr	Pro	Cys	Lys	Tyr	Pro
		275					280					285			
Gln	Lys	Ile	Asp	Gly	Lys	Cys	Cys	Lys	Val	Cys	Pro	Glu	Glu	Leu	Pro
	290					295					300				
Gly	Gln	Ser	Phe	Asp	Asn	Lys	Gly	Tyr	Phe	Cys	Gly	Glu	Glu	Thr	Met
305					310					315					320
Pro	Val	Tyr	Glu	Ser	Val	Phe	Met	Glu	Asp	Gly	Glu	Thr	Thr	Arg	Lys
				325					330					335	
Ile	Ala	Leu	Glu	Thr	Glu	Arg	Pro	Pro	Gln	Val	Glu	Val	His	Val	Trp
			340					345					350		
Thr	Ile	Arg	Lys	Gly	Ile	Leu	Gln	His	Phe	His	Ile	Glu	Lys	Ile	Ser
		355					360					365			
Lys	Arg	Met	Phe	Glu	Glu	Leu	Pro	His	Phe	Lys	Leu	Val	Thr	Arg	Thr
	370					375					380				
Thr	Leu	Ser	Gln	Trp	Lys	Ile	Phe	Thr	Glu	Gly	Glu	Ala	Gln	Ile	Ser
385					390					395					400
Gln	Met	Cys	Ser	Ser	Arg	Val	Cys	Arg	Thr	Glu	Leu	Glu	Asp	Leu	Val
				405					410					415	
Lys	Val	Leu	Tyr	Leu	Glu	Arg	Ser	Glu	Lys	Gly	His	Cys			

420

425

<210> 29
 <211> 38
 <212> DNA
 <213> Homo sapiens

<400> 29
 cggaattcgc caccatggga ggcataaaat acatcttt

38

<210> 30
 <211> 33
 <212> DNA
 <213> Homo sapiens

<400> 30
 gcgggatcca cagtggccct tttcagatct etc

33

<210> 31
 <211> 936
 <212> PRT
 <213> Mus musculus

<400> 31
 Thr Gly Pro Glu Pro Pro Ala Leu Pro Ile Arg Ser Glu Lys Glu Pro
 1 5 10 15
 Leu Pro Val Arg Gly Ala Ala Gly Cys Ser Phe Gly Gly Lys Val Tyr
 20 25 30
 Ala Leu Asp Glu Thr Trp His Pro Asp Leu Gly Glu Pro Phe Gly Val
 35 40 45
 Met Arg Cys Val Leu Cys Ala Cys Glu Ala Pro Gln Trp Ala Arg Arg
 50 55 60
 Gly Arg Gly Pro Gly Arg Val Ser Cys Lys Asn Ile Lys Pro Gln Cys
 65 70 75 80
 Pro Thr Leu Ala Cys Arg Gln Pro Arg Gln Leu Pro Gly His Cys Cys
 85 90 95
 Gln Thr Cys Pro Gln Glu Arg Ser Asn Leu Asp Pro Gln Pro Ala Gly
 100 105 110
 Leu Val Phe Glu Tyr Pro Arg Asp Pro Glu His Arg Ser Tyr Ser Asp
 115 120 125
 Arg Gly Glu Pro Gly Val Gly Glu Arg Thr Arg Ala Asp Gly His Thr
 130 135 140
 Asp Phe Val Ala Leu Leu Thr Gly Pro Arg Ser Gln Ala Val Ala Arg
 145 150 155 160

Ala Arg Val Ser Leu Leu Arg Ser Ser Leu Arg Phe Ser Val Ser Tyr
165 170 175

Gln Arg Leu Asp Arg Pro Ser Arg Val Arg Phe Thr Asp Pro Thr Gly
180 185 190

Asn Ile Leu Phe Glu His Pro Ala Thr Pro Thr Gln Asp Gly Leu Val
195 200 205

Cys Gly Val Trp Arg Ala Val Pro Arg Leu Ser Val Arg Leu Leu Arg
210 215 220

Ala Glu Gln Leu Arg Val Ala Leu Val Thr Ser Thr His Pro Ser Gly
225 230 235 240

Glu Val Trp Gly Pro Leu Ile Trp Gln Gly Ala Leu Ala Ala Glu Thr
245 250 255

Phe Ser Ala Ile Leu Thr Leu Glu Asp Pro Leu Gln Arg Gly Val Gly
260 265 270

Gly Ile Ala Leu Leu Thr Leu Ser Asp Thr Glu Asp Ser Leu His Phe
275 280 285

Leu Leu Leu Phe Arg Gly Leu Leu Gly Gly Leu Ala Gln Ala Pro Leu
290 295 300

Lys Leu Gln Ile Leu His Gln Gly Gln Leu Leu Arg Glu Leu Gln Ala
305 310 315 320

Asn Thr Ser Ala Gln Glu Pro Gly Phe Ala Glu Val Leu Pro Ser Leu
325 330 335

Thr Asp Gln Glu Met Asp Trp Leu Glu Leu Gly Glu Leu Gln Met Val
340 345 350

Leu Glu Lys Ala Gly Gly Pro Glu Leu Arg Ile Ser Gly Tyr Ile Thr
355 360 365

Thr Arg Gln Ser Cys Asp Val Leu Gln Ser Val Leu Cys Gly Ala Asp
370 375 380

Ala Leu Ile Pro Val Gln Thr Gly Ala Ala Gly Ser Ala Ser Phe Ile
385 390 395 400

Leu Leu Gly Asn Gly Ser Leu Ile Tyr Gln Val Gln Val Val Gly Thr
405 410 415

Gly Ser Glu Val Val Ala Met Thr Leu Glu Thr Lys Pro Gln Arg Lys
420 425 430

Asn Gln Arg Thr Val Leu Cys His Met Ala Gly Leu Gln Pro Gly Gly
435 440 445

His Met Ala Val Gly Met Cys Ser Gly Leu Gly Ala Arg Gly Ala His
450 455 460

Sequence

Sub
a1

Met Leu Leu Gln Asn Glu Leu Phe Leu Asn Val Gly Thr Lys Asp Phe
 465 470 475 480
 Pro Asp Gly Glu Leu Arg Gly His Val Thr Ala Leu Cys Tyr Ser Gly
 485 490 495
 His Ser Ala Arg Tyr Asp Arg Leu Pro Val Pro Leu Ala Gly Ala Leu
 500 505 510
 Val Leu Pro Pro Val Arg Ser Gln Ala Ala Gly His Ala Trp Leu Ser
 515 520 525
 Leu Asp Thr His Cys His Leu His Tyr Glu Val Leu Leu Ala Gly Leu
 530 535 540
 Gly Gly Ser Glu Gln Gly Thr Val Thr Ala His Leu Leu Gly Pro Pro
 545 550 555 560
 Gly Met Pro Gly Pro Gln Arg Leu Leu Lys Gly Phe Tyr Gly Ser Glu
 565 570 575
 Ala Gln Gly Val Val Lys Asp Leu Glu Pro Val Leu Leu Arg His Leu
 580 585 590
 Ala Gln Gly Thr Ala Ser Leu Leu Ile Thr Thr Lys Ser Ser Pro Arg
 595 600 605
 Gly Glu Leu Arg Gly Gln Val His Ile Ala Ser Gln Cys Glu Ala Gly
 610 615 620
 Gly Leu Arg Leu Ala Ser Glu Gly Val Gln Met Pro Leu Ala Pro Asn
 625 630 635 640
 Gly Glu Ala Ala Thr Ser Pro Met Leu Pro Ala Gly Pro Gly Pro Glu
 645 650 655
 Ala Pro Val Pro Ala Lys His Gly Ser Pro Gly Arg Pro Arg Asp Pro
 660 665 670
 Asn Thr Cys Phe Phe Glu Gly Gln Gln Arg Pro His Gly Ala Arg Trp
 675 680 685
 Ala Pro Asn Tyr Asp Pro Leu Cys Ser Leu Cys Ile Cys Gln Arg Arg
 690 695 700
 Thr Val Ile Cys Asp Pro Val Val Cys Pro Pro Pro Ser Cys Pro His
 705 710 715 720
 Pro Val Gln Ala Leu Asp Gln Cys Cys Pro Val Cys Pro Glu Lys Gln
 725 730 735
 Arg Ser Arg Asp Leu Pro Ser Leu Pro Asn Leu Glu Pro Gly Glu Gly
 740 745 750
 Cys Tyr Phe Asp Gly Asp Arg Ser Trp Arg Ala Ala Gly Thr Arg Trp
 755 760 765

His	Pro	Val	Val	Pro	Pro	Phe	Gly	Leu	Ile	Lys	Cys	Ala	Val	Cys	Thr	
770						775					780					
Cys	Lys	Gly	Ala	Thr	Gly	Glu	Val	His	Cys	Glu	Lys	Val	Gln	Cys	Pro	
785					790					795					800	
Arg	Leu	Ala	Cys	Ala	Gln	Pro	Val	Arg	Ala	Asn	Pro	Thr	Asp	Cys	Cys	
				805					810					815		
Lys	Gln	Cys	Pro	Val	Gly	Ser	Gly	Thr	Asn	Ala	Lys	Leu	Gly	Asp	Pro	
			820					825					830			
Met	Gln	Ala	Asp	Gly	Pro	Arg	Gly	Cys	Arg	Phe	Ala	Gly	Gln	Trp	Phe	
		835					840					845				
Pro	Glu	Asn	Gln	Ser	Trp	His	Pro	Ser	Val	Pro	Pro	Phe	Gly	Glu	Met	
	850					855					860					
Ser	Cys	Ile	Thr	Cys	Arg	Cys	Gly	Ala	Gly	Val	Pro	His	Cys	Glu	Arg	
865					870					875					880	
Asp	Asp	Cys	Ser	Pro	Pro	Leu	Ser	Cys	Gly	Ser	Gly	Lys	Glu	Ser	Arg	
				885					890					895		
Cys	Cys	Ser	His	Cys	Thr	Ala	Gln	Arg	Ser	Ser	Glu	Thr	Arg	Thr	Leu	
			900					905					910			
Pro	Glu	Leu	Glu	Lys	Glu	Ala	Glu	His	Ser	Val	Asp	Gly	Ser	Gly	Thr	
		915					920					925				
Asp	Tyr	Lys	Asp	Asp	Asp	Asp	Lys									
	930					935										